

## Environmental Protection Agency

## § 94.201

The diesel fuel shall also meet the specifications (as determined using methods incorporated by reference at

§ 94.5) in Table B-5, or substantially equivalent specifications approved by the Administrator, as follows:

TABLE B-5.—FEDERAL TEST FUEL SPECIFICATIONS

Item	Procedure (ASTM) <sup>1</sup>	Value (Type 2-D)
Cetane .....	D 613-95 .....	40-48
Distillation Range:		
IBP, °C .....	D 86-97 .....	171-204
10% point, °C .....	D 86-97 .....	204-238
50% point, °C .....	D 86-97 .....	243-282
90% point, °C .....	D 86-97 .....	293-332
EP, °C .....	D 86-97 .....	321-366
Gravity, API .....	D 287-92 .....	32-37
Total Sulfur, weight% .....	D 129-95 or D 2622-98 .....	0.03-0.80
Hydrocarbon composition:		
Aromatics, % vol. ....	D 1319-98 or D 5186-96 .....	10 <sup>(2)</sup>
Paraffins, Naphthalenes, Olefins .....	D 1319-98 .....	<sup>(3)</sup>
Flashpoint, °C (minimum) .....	D 93-97 .....	54
Viscosity @ 38 °C, Centistokes .....	D 445-97 .....	2.0-3.2

<sup>1</sup> All ASTM procedures in this table have been incorporated by reference. See § 94.6.

<sup>2</sup> Minimum.

<sup>3</sup> Remainder.

(2) Other diesel fuels may be used for testing provided:

(i) They are commercially available; and

(ii) Information, acceptable to the Administrator, is provided to show that only the designated fuel would be used in service; and

(iii) Use of a fuel listed under paragraph (a)(1) of this section would have a detrimental effect on emissions or durability; and

(iv) Written approval from the Administrator of the fuel specifications is provided prior to the start of testing.

(3) The specification of the fuel to be used under paragraphs (a)(1), and (a)(2) of this section shall be reported in the application for certification.

(b) *Other fuel types.* For engines that are designed to be capable of using a type of fuel (or mixed fuel) instead of or in addition to distillate diesel fuel (e.g., natural gas, methanol, or nondistillate diesel), and that are expected to use that type of fuel (or mixed fuel) in service, a commercially available fuel of that type shall be used for exhaust emission testing. The manufacturer shall propose for the Administrator's approval a set of test fuel specifications that take into account the engine design and the properties of commercially available fuels. The Administrator may require testing on each fuel if it is designed to operate on more

than one fuel. These test fuel specifications shall be reported in the application for certification.

(c) *Service accumulation fuel.* Fuel used for service accumulation shall be representative of the typical fuel expected to be used by the engines in service.

(d) *Correction for sulfur.* (1) Particulate emission measurements from engines without exhaust aftertreatment obtained using a diesel fuel containing more than 0.40 weight percent sulfur may be adjusted to a sulfur content of 0.40 weight percent.

(2) Adjustments to the particulate measurement shall be made using the following equation:

$$PM_{adj} = PM - [BSFC * 0.0917 * (FSF - 0.0040)]$$

Where:

$PM_{adj}$ =adjusted measured PM level [g/kW-hr]

$PM$ =measured weighted PM level [g/KW-hr]

$BSFC$ =measured brake specific fuel consumption [g/KW-hr]

$FSF$ =fuel sulfur weight fraction

## Subpart C—Certification Provisions

### § 94.201 Applicability.

The requirements of this subpart are applicable to manufacturers of engines subject to the standards of subpart A of this part.